Supporting Information

A facile, rapid and sensitive detection of MRSA using a CRISPR-mediated DNA FISH method, antibody-like dCas9/sgRNA complex

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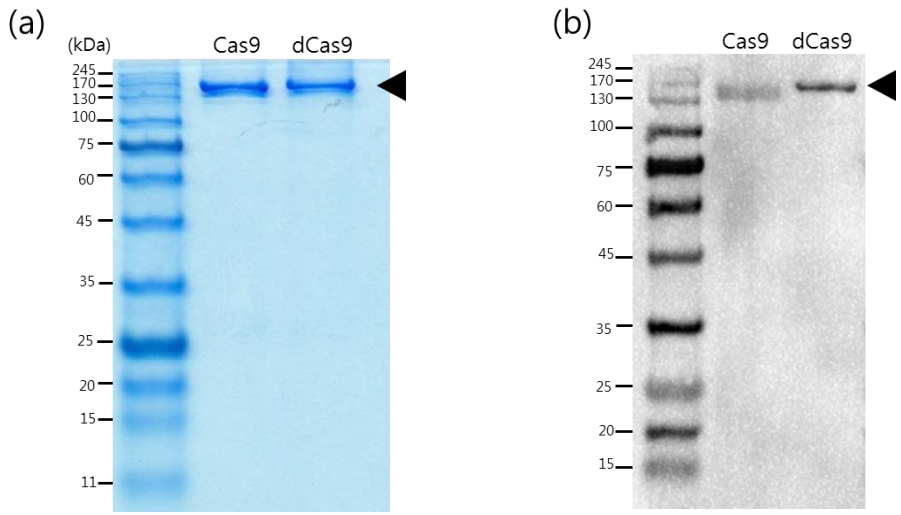

Figure S1. Identification of purified Cas9 and dCas9 by SDS-PAGE and Western blot analysis. (a) Purified proteins were applied to a 10% SDS-polyacrylamide gel under reducing condition followed by Coomassie Brilliant Blue staining. (b) Western blot using anti-6xHis monoclonal antibody and HRP-conjugated anti-mouse IgG Fc. The relative molecular weight (kDa) of commercial prestained markers is indicated on the left. The arrows indicate the purified Cas9 and dCas9.

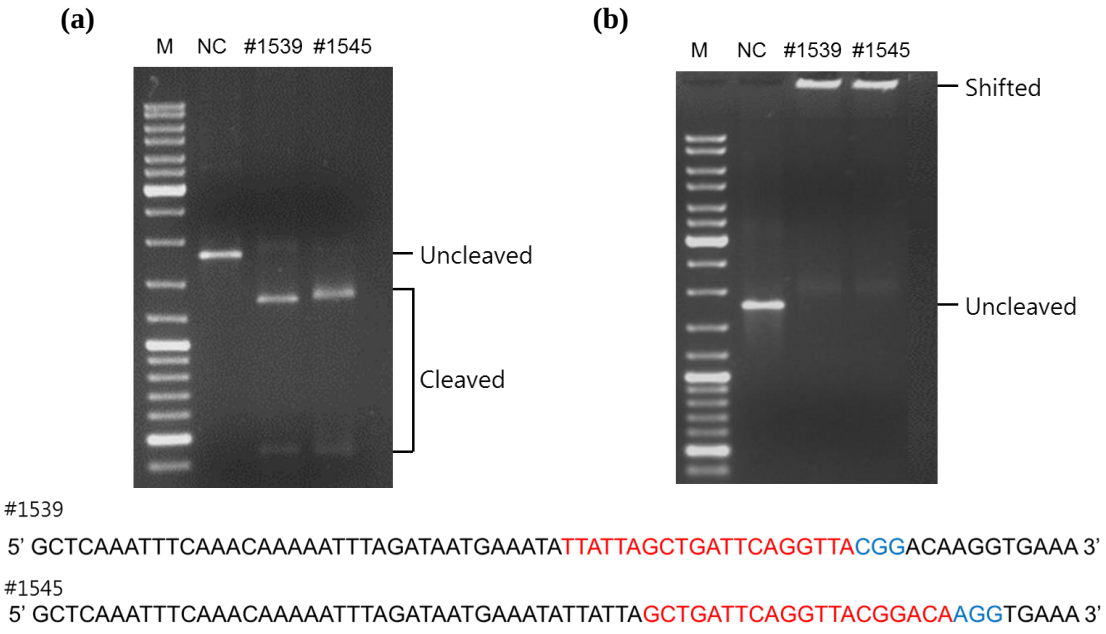

Figure S2. Site-specific DNA recognition of sgRNAs targeting the mecA gene in complexes with Cas9 or dCas9. The targeting efficiencies of two different sgRNAs (#1539 and #1545) were tested. (a) The Cas9/sgRNA-mediated cleavage of the mecA gene and (b) dCas9/sgRNA-mediated shift in mobility were monitored and visualized using 0.8% agarose gel electrophoresis. A negative control (NC) that lacked sgRNA was included for comparison. The sequences of the used sgRNAs are given under the graphs. The PAM and target sequences are indicated in blue and red, respectively.